

DISCRETE MATH: SET HOMEWORK

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For questions These Questions use the following Sets and answer the questions.

- (1) $U = \{1, 2, 3, 4, 5, 6, 7, 8\}$
 $A = \{1, 2, 3, 4\}$
 $B = \{4, 5, 6, 7\}$
 $C = \{4, 6, 7, 8\}$

- (2) $U = \{0, 1, 3, 5, 7, 9, 11, 13\}$
 $A = \{1, 3, 5\}$
 $B = \{5, 7, 9\}$
 $C = \{5, 9, 11, 13\}$

- (3) $U = \{a, b, c, d, e, f, g, h\}$
 $A = \{a, e, e, g\}$
 $B = \{b, d, f, h\}$
 $C = \{a, d, e, h\}$

- (4) $U = \{i, j, k, l, m, n, o, p\}$
 $A = \{i, j, k, l\}$
 $B = \{i, l, m, n\}$
 $C = \{l, n, o, p\}$

For exercises 5-15 Use the following given information and use it to build the various sets.

Given: $A = \{a, b, c, d, e, f\}$, $B = \{a, c, e, l\}$, $C = \{b, d, f, g\}$,
 $D = \{a, f, i, l\}$, $E = \{a, b, e, k\}$, $F = \{g, h, i, j, k, l\}$, $G = \{h, j, k\}$,
 $H = \{e, h, i, j, l\}$, $I = \{a, f\}$

(5) What elements are contained from combining the sets of $A \cup B$?

(6) What elements are contained from combining the sets of $A \cap C$?

(7) What elements are contained from combining the sets of G union B ?

(8) What elements are contained from combining the sets of H intersection D ?

(9) What is the new set J of $A \neq D$?

(10) What sets from the Given Statement are subsets of A ?

- (11) Given that Set A is your Universe, what is the complement of subset B ?
- (12) Name an element in Set A . Name an element in Subset E that is not in Set A
- (13) Name an element in Set F . Name an element in Subset C that is not in Set E
- (14) Is set A a null set? Express two different ways that you can show or write the null set.
- (15) Create your own set with 6 elements or more and create a subset of that set.